THE INDEPENDENT BOUTIQUE ADVANTAGE
IN VOLATILE ENVIRONMENTS

AMG

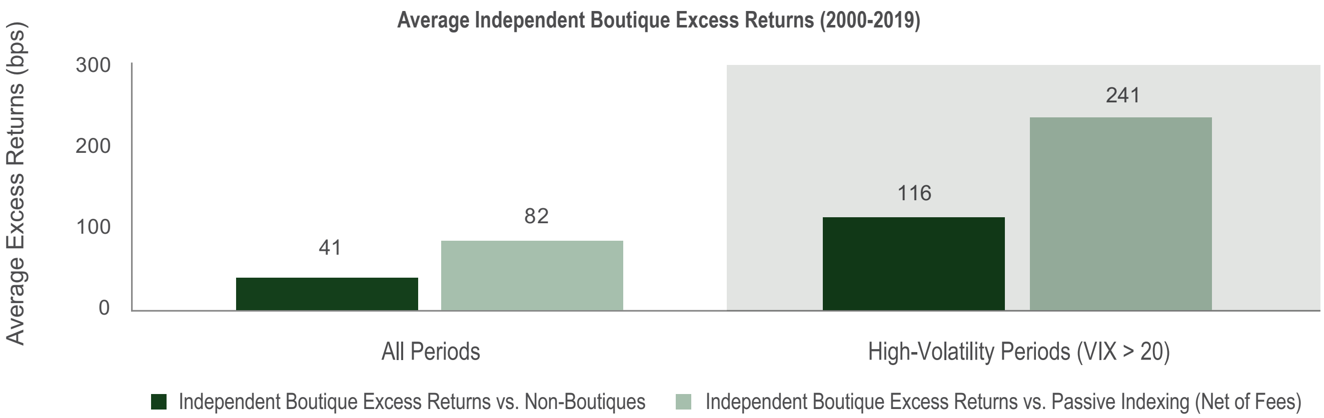
Executive Summary:
The Independent Boutique Advantage in Volatile Environments

Independent active boutique managers have outperformed both non-boutiques and passive indexing over the last 20 years, with highest excess returns during years of elevated volatility

The debate over the value proposition of active management has intensified, particularly against the backdrop of increased market volatility. However, this debate typically overlooks key differences among active managers. A subset of active managers have inherent competitive advantages in generating alpha: partner-owned boutique firms. As a supplement to AMG's proprietary study, *The Boutique Premium*, we examined independent boutique performance and its relationship to market volatility over the past 20 years.[1] Our new study demonstrates that:

- Boutiques meaningfully outperformed both non-boutiques and passive indexing in periods of elevated volatility
- Boutiques generated substantial net excess returns versus indices in all 11 institutional equity categories studied
- Boutiques also significantly outperformed non-boutiques in 10 of 11 institutional equity categorie

FIGURE 1: INDEPENDENT BOUTIQUE EXCESS RETURNS IN VOLATILE ENVIRONMENTS



Source: AMG proprietary analysis. Firms represented include AMG Affiliates. MercerInsight® database utilized for return data. Primary indices include MSCI World, MSCI Emerging Markets, Russell 1000 Value, Russell 1000 Growth, Russell 1000, Russell Midcap Value, Russell Midcap Growth, Russell Midcap, Russell 2000 Value, Russell 2000 Growth, and Russell 2000. Average VIX values calculated by AMG utilizing CBOE historical data.

Independent boutiques are uniquely positioned to generate consistent outperformance

Sophisticated investors around the world are recognizing the ability of focused, independent boutique active investment managers to outperform both non-boutique peers and indices. Given several core characteristics, partner-owned boutique firms are well-positioned to consistently outperform:

- Principals have significant direct equity ownership, ensuring alignment of interests with clients
- Presence of a multi-generational management team, fully engaged across the business
- Entrepreneurial culture with partnership orientation, which attracts talented investors
- Investment-centric organizational alignment, including careful management of capacity
- Principals are committed to building an enduring franchise, embedding an appropriately long-term orientation
- Operational autonomy and investment independence

[1] The Boutique Premium report, a proprietary AMG study on boutique active managers published in 2015 and updated in 2018, is available at https://amg.com/the-boutique-advantage.html.

Impact of Market Volatility on Independent Boutique Alpha Generation

Independent boutique investment firms are uniquely well-positioned to consistently generate investment alpha and outperform non-boutiques and passive indexing due to several core characteristics: principals with significant direct equity ownership and a high degree of alignment with clients, an entrepreneurial culture with a partnership orientation, an investment-centric organizational alignment, and principals committed to building an enduring franchise with a long-term orientation.

Among external factors that affect active management performance, market volatility is significant. As a supplement to our proprietary study *The Boutique Premium*, we examined boutique performance and its relationship to market volatility over the past 20 years.[1]

Our proprietary study of institutional equity strategy returns and market volatility data for the trailing 20-year period ended December 31, 2019 demonstrates that independent boutique managers generated additional value for clients, relative to both non-boutique managers and indices during periods of elevated volatility. In particular:

- Independent active boutiques significantly outperformed passive indexing and non-boutiques during periods of heightened market volatility
- During more volatile periods, independent active boutiques' outperformance relative to passive indexing was consistent across equity product categories
- Global Equities, Emerging Market Equities, and Small Cap Equities boutique strategies exhibited the strongest performance during years of elevated market volatility

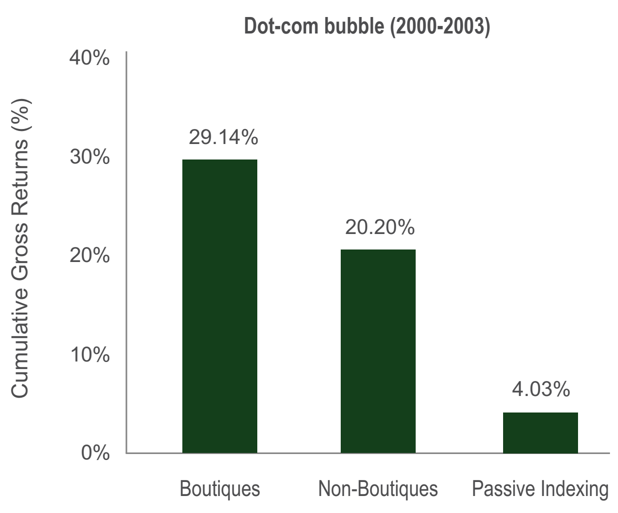
Furthermore, the dispersion of excess returns across all levels of heightened volatility suggests that extreme market disruption is not the only environment in which boutiques generate alpha. In fact, any above-average levels of volatility provided greater asset dispersion and enhanced opportunities for the best active managers to generate outperformance.

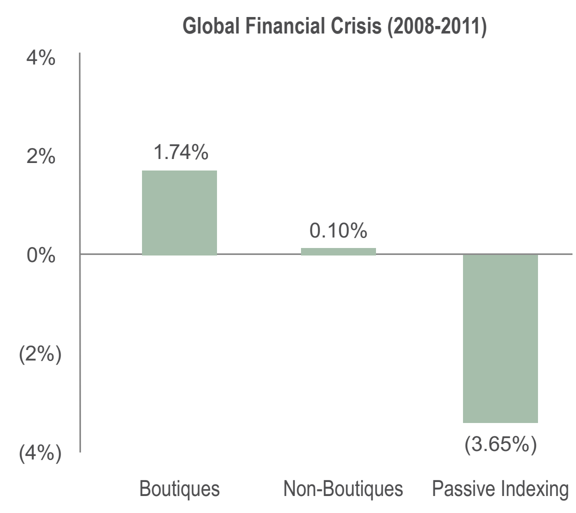
Scope and Process of the Analysis

Independent boutiques outperformed non-boutiques and indices across market cycles over the past 20 years, and the outperformance was most pronounced during periods of elevated volatility, according to our study.

Similar to *The Boutique Premium* report, we studied a 20-year period across the same 11 institutional equity product categories previously examined: Emerging Markets Equity, Global Equity, U.S. Large Cap Value Equity, U.S. Large Cap Growth Equity, U.S. Large Cap Core Equity, U.S. Mid-Cap Value Equity, U.S. Mid-Cap Growth Equity, U.S. Mid-Cap Core Equity, U.S. Small Cap Value Equity, U.S. Small Cap Growth Equity, and U.S. Small Cap Core Equity. Consistent with *The Boutique Premium* report, our analysis incorporated more than 1,300 individual investment management firms and nearly 5,000 institutional equity strategies comprising approximately $7 trillion in assets under management ("AUM"). Using the Chicago Board Options Exchange (CBOE) Volatility Index (VIX) as a proxy for market volatility, we looked at the annual average daily spot rates over the 20-year historical period. Throughout this supplemental analysis, years of "high volatility" are defined as years during which the annual average VIX was above 20, and years where the annual average for the index was below 20 are referred to as periods of lower volatility.

FIGURE 2: BOUTIQUE CUMULATIVE RETURNS DURING PERIODS OF ELEVATED VOLATILITY





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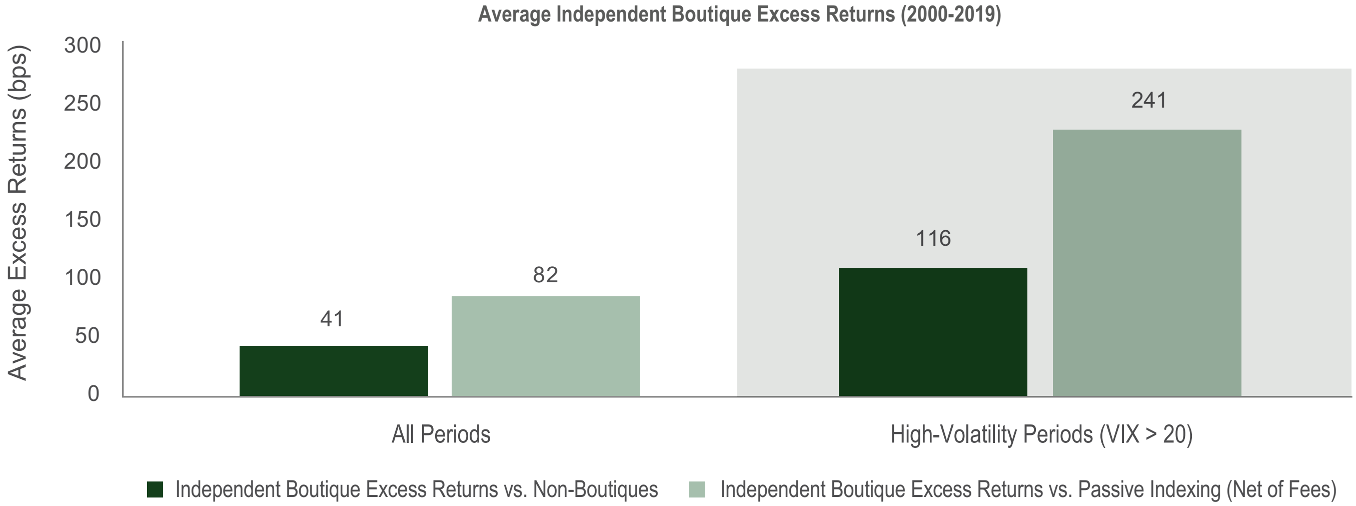
[1]The Boutique Premium report, a proprietary AMG study on boutique active managers published in 2015 and updated in 2018, is available at https://amg.com/the-boutique-advantage.html.

Independent boutique returns over the past 20 years were highest during years of elevated market volatility: outperformance relative to passive indexing was 3x greater in volatile periods

Over the past 20 years, independent active boutiques generated an average of 82 bps of excess returns over indices (net of average fees). During years of elevated market volatility, boutique returns were distinctly higher, at an average 241 bps of excess returns over passive indexing, exceeding the average boutique outperformance across all periods by 159 bps. Against non-boutiques, boutiques generated an additional 116 bps of excess returns during periods of elevated volatility, exceeding the overall average of 41 bps by 75 bps. Factors that contributed to higher boutique excess returns: i) independent boutique returns were more resilient during market downturns than those of non-boutiques and indices, and ii) independent boutiques outperformed non-boutiques and indices by a wider margin during recoveries following market dislocations.

FIGURE 3: INDEPENDENT BOUTIQUE EXCESS RETURNS IN VOLATILE ENVIRONMENTS

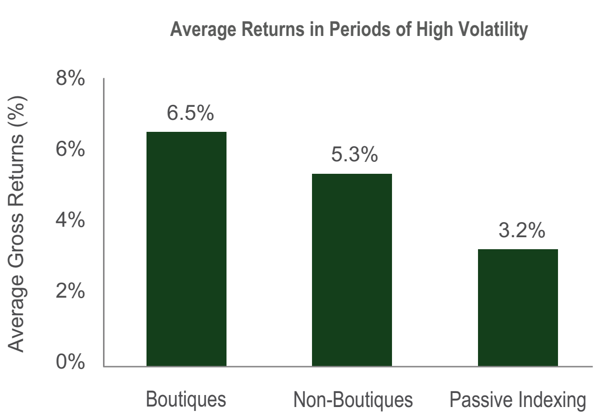


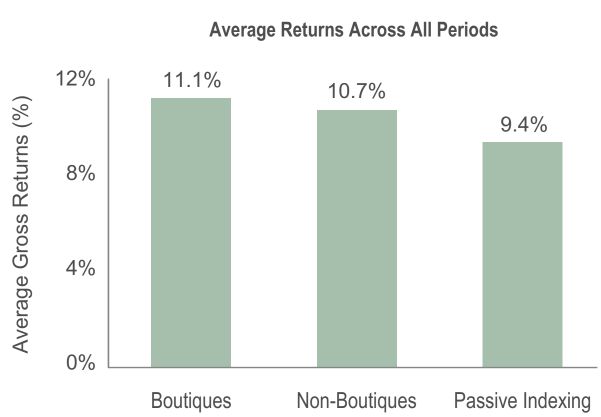
Source: AMG proprietary analysis. Firms represented include AMG Affiliates. MercerInsight® database utilized for return data. Primary indices include MSCI World, MSCI Emerging Markets, Russell 1000 Value, Russell 1000 Growth, Russell 1000, Russell Midcap Value, Russell Midcap Growth, Russell Midcap, Russell 2000 Value, Russell 2000 Growth, and Russell 2000. Average VIX values calculated by AMG utilizing CBOE historical data.

During periods of high volatility, which are typically accompanied by higher dispersion of asset returns, skilled active managers have been able to discern the most significant alpha generation opportunities and distinguish themselves. A look at average returns over periods of heightened volatility levels demonstrates much higher levels of dispersion between boutiques, non-boutiques, and index returns. Boutique average gross returns exceeded average index returns, with independent boutiques returning 6.5%, while non-boutiques and passive indexing returned 5.3% and 3.2% respectively.

In contrast, lower-volatility environments are characterized by fewer and smaller movements in securities prices, resulting in reduced opportunities for active managers to add value beyond market gains. Throughout the last 20 years, including periods of low volatility, boutiques, non-boutiques, and passive indexing all produced strong absolute returns with low dispersion between average returns. Boutiques generated average annual gross returns of 11.1% while non-boutiques generated 10.7% and indices generated 9.4%. Net of average fees, boutiques outperformed indices by 82 bps and non-boutiques by 41 bps.

FIGURE 4: 20-YEAR AVERAGE GROSS RETURNS FOR INDEPENDENT BOUTIQUES, NON-BOUTIQUES AND PASSIVE INDEXING





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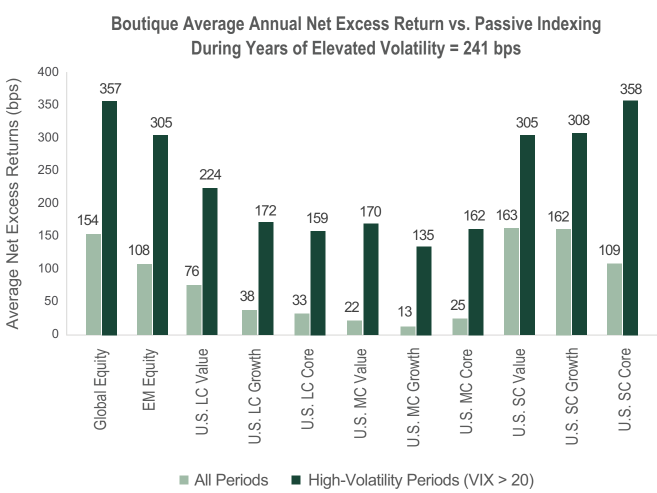
Independent active boutique outperformance during periods of elevated volatility occurred across equity product strategies

Against their respective benchmarks, boutique strategies generated excess returns across 11 out of 11 product categories examined. In particular:

- Global Equities generated an average 357 bps of excess returns during years of elevated volatility versus 154 bps of excess returns relative to passive indexing net of fees over the past 20 years
- Emerging Market equities generated an average 305 bps of excess returns during years of elevated volatility versus 108 bps of excess returns relative to passive indexing net of fees over the past 20 years
- Small Cap equities generated an average 324 bps of excess returns during years of elevated volatility versus 145 bps of excess returns relative to passive indexing net of fees over the past 20 years

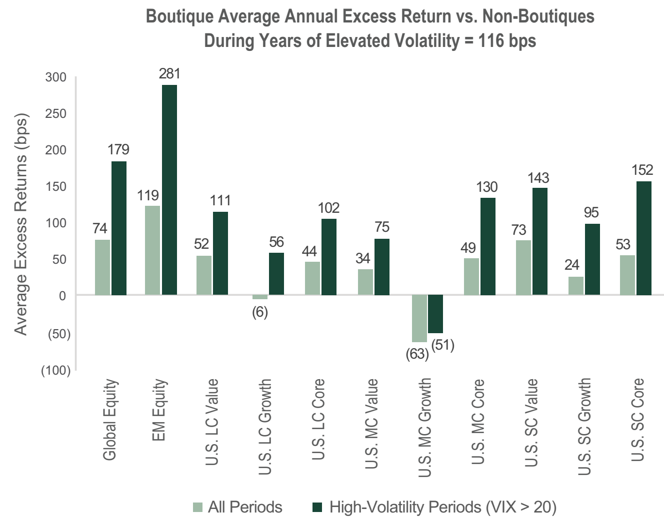
FIGURE 5: BOUTIQUE NET EXCESS RETURNS VS. PASSIVE INDEXING (BY STRATEGY)



Source: AMG proprietary analysis. Firms represented include AMG Affiliates. MercerInsight® database utilized for return and fee data. MercerInsight® database utilized for return data. Net returns estimated by taking one-year rolling gross returns for institutional strategies during trailing 20-year period ending 12/31/19 less estimated average boutique fee rates based on available data for each product category. Primary indices include MSCI World, MSCI Emerging Markets, Russell 1000 Value, Russell 1000 Growth, Russell 1000, Russell Midcap Value, Russell Midcap Growth, Russell Midcap, Russell 2000 Value, Russell 2000 Growth, and Russell 2000. Average VIX values calculated by AMG utilizing CBOE historical data.

Against non-boutiques, independent boutiques generated excess returns in 10 out of 11 product categories examined. In particular, Emerging Market equity strategies at boutiques generated an average 281 bps of excess returns over non-boutiques during periods of heightened volatility while Small Cap equities generated an average 130 bps of excess returns during years of greater volatility. In comparison, across all 20 years, Emerging Market equity strategies at boutiques generated 119 bps of excess returns over non-boutiques, while Small Cap boutique strategies generated 50 bps of excess returns.

FIGURE 6: BOUTIQUE EXCESS RETURNS VS. NON-BOUTIQUES (BY STRATEGY)

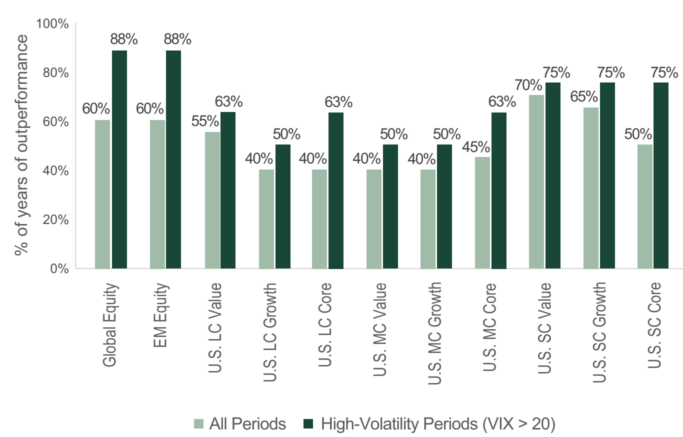


Source: AMG proprietary analysis. Firms represented include AMG Affiliates. MercerInsight® database utilized for return data. Average VIX values calculated by AMG utilizing CBOE historical data.

Independent active boutique outperformance during periods of elevated market volatility was frequent throughout the two decades examined

Across product categories, the average boutique strategy outpaced its primary index net of fees a majority of the time during years of elevated volatility, in 11 out of 11 product categories examined.

FIGURE 7: FREQUENCY OF OUTPERFORMANCE VS. PASSIVE INDEXING

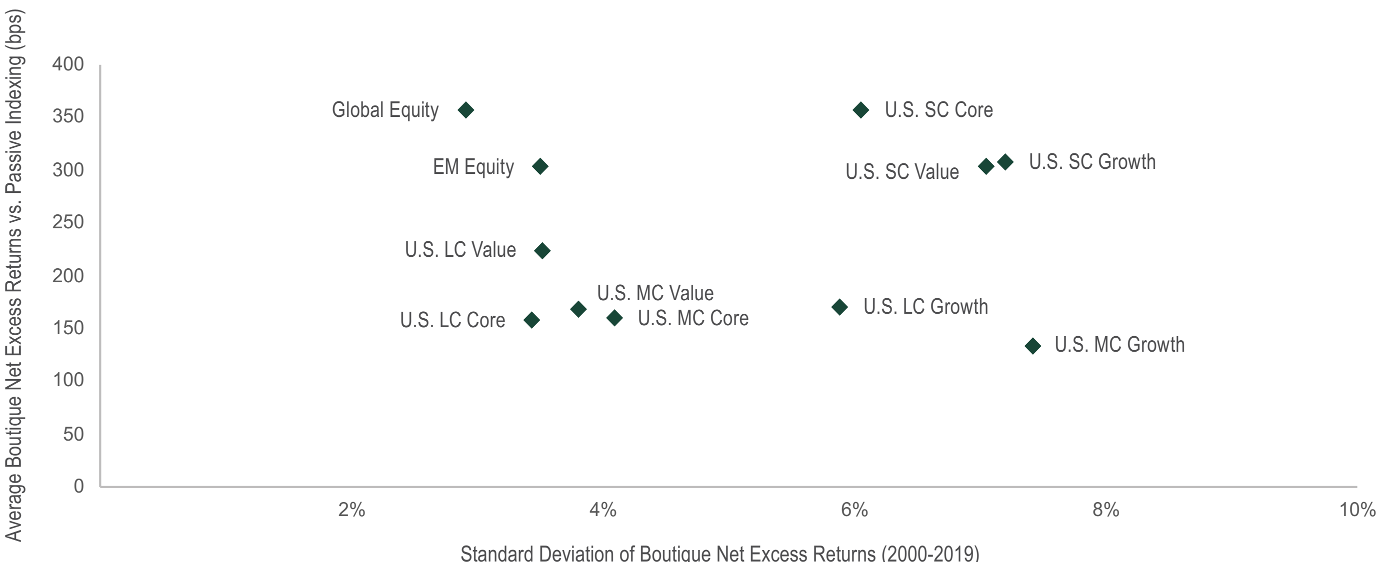


Source: AMG proprietary analysis. Firms represented include AMG Affiliates. MercerInsight® database utilized for return and fee data. MercerInsight® database utilized for return data. Net returns estimated by taking one-year rolling gross returns for institutional strategies during trailing 20-year period ending 12/31/19 less estimated average boutique fee rates based on available data for each product category. Primary indices include MSCI World, MSCI Emerging Markets, Russell 1000 Value, Russell 1000 Growth, Russell 1000, Russell Midcap Value, Russell Midcap Growth, Russell Midcap, Russell 2000 Value, Russell 2000 Growth, and Russell 2000. Average VIX values calculated by AMG utilizing CBOE historical data.

Small Cap, Emerging Markets, and Global Equity boutique strategies exhibited the strongest relative performance during periods of elevated market volatility

Across the product categories, the magnitude and frequency of outperformance in less-efficient markets was notable. Boutique outperformance in Small Cap, Emerging Markets, and Global Equity strategies significantly outpaced the overall boutique average across all periods and was even more pronounced during years of elevated market volatility. Standard deviation measures of returns across all strategies further reveal that Global Equities, Small Cap Value, Small Cap Growth, and Small Cap Core boutique strategies exhibited particularly strong risk-adjusted returns, consistently generating pronounced excess returns in periods of heightened volatility.

FIGURE 8: INDEPENDENT ACTIVE BOUTIQUE OUTPERFORMANCE RELATIVE TO PASSIVE INDEXING VS. STANDARD DEVIATION



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The Independent Boutique Advantage in Volatile Markets

Our in-depth analysis of data over the past 20 years reveals that independent boutiques have outperformed during periods of elevated market volatility. Several factors contribute to this result, including:

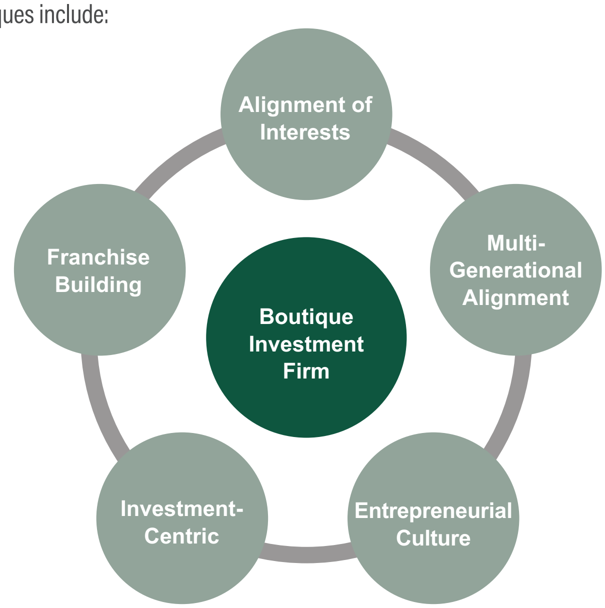
- Boutiques are uniquely positioned to manage toward optimal risk-adjusted returns
- High-volatility environments lead to increased dispersion of asset returns, which creates additional alpha opportunities for the highest-quality active managers
- In times of market turmoil or uncertainty, a skilled investment manager's ability to dynamically position portfolios can help mitigate the effects of a market downturn on a portfolio

We have previously mentioned that independent boutiques have an investment-centric organizational alignment, typically geared toward a distinct investment philosophy with a highly focused investment process. These investment considerations have primacy at a boutique, which is more likely to manage toward optimal risk-adjusted returns, often setting capacity limits to remain nimble in its investment approach. This has especially held true in periods of higher market volatility and downside risk, when active boutique managers have been better-positioned than passive indexers and non-boutique peers to both protect investors from market losses and leverage buying opportunities. Less-efficient market strategies, such as small cap and international and emerging markets, appear to provide the greatest opportunities for active boutique managers to outperform.

In identifying strategies most likely to outperform during periods of elevated market volatility and uncertainty, our research points squarely at those run by boutique managers. Independent boutique managers have historically performed better than both their benchmark indices and their non-boutique manager peers. This is most likely due to the characteristics of boutique managers that include a focus on investment management, a high percentage of firm equity ownership among investment personnel, principals committed to building an enduring franchise, and a long-term oriented culture.

Core characteristics give boutiques an advantage in generating long-term outperformance

Sophisticated investors around the world are recognizing the ability of focused boutique active investment managers to outperform both non-boutique peers and passive indexing. Many of these investors utilize a barbell strategy, in which they complement core passive exposures with allocations to active equity and alternative strategies managed by boutiques. Core characteristics of boutiques include:



- **Alignment of interests:** Direct equity ownership ensures that key principals have a vested interest in the long-term success of a boutique. Many of the most talented investment professionals in the world are drawn to the boutique structure, an incentive system in which they own the results of their investment performance.
- **Multi-generational management:** The presence of a multi-generational management team, including a succession plan, is another core foundation of a boutique. The existence of a cross-generational succession plan ensures that key principals will remain motivated and highly involved in business development.
- **Entrepreneurial culture with a partnership orientation:** Key partners control the daily operations of a boutique and are actively involved in business planning and building an enduring franchise. Great investors are more likely to be drawn to boutiques, which offer an entrepreneurial culture and enable them to have a direct impact on the future success of the business.
- **Investment-centric organizational alignment:** A boutique's organization is typically aligned with its investment process, geared toward a distinct investment philosophy (e.g., value-oriented with a strong focus on purchasing securities below their intrinsic value) with a highly focused investment process (e.g., bottom-up stock-picking). These investment considerations have primacy at a boutique, which is more likely to manage toward optimal risk-adjusted returns, often setting capacity limits to remain nimble in its investment approach.
- **Commitment to building an enduring franchise:** Key principals are committed to the long-term growth and success of a boutique, often signaled by their willingness to sign multi-year employment agreements. A stable, long-term environment is ideal for generating investment success, and a group of principals committed to clients and each other through long-term equity ownership is best positioned to deliver this success.

Methodology

Primary Data Sources

The MercerInsight® global database was the primary source utilized for return data in our analysis, given its deep pool of performance data for institutional equity strategies offered by investment managers around the world.

Classification of individual investment managers (and their corresponding investment strategies in the MercerInsight® database) as either "independent boutiques" or "non-boutiques" was based entirely on AMG's proprietary analysis, utilizing the SEC database and individual manager disclosures for background information on ownership structure, scope of business, and level of AUM.

Scope and Process of Analysis

Our analysis incorporated more than 1,300 individual investment management firms around the world and nearly 5,000 institutional equity strategies comprising approximately $7 trillion in AUM. We analyzed rolling one-year returns for the trailing 20-year period ending 12/31/19, across 11 different investment product categories, on a strategy-by-strategy basis. More specific details regarding the data set behind our analysis are as follows:

- **11 investment product categories:** Our analysis spanned the 11 broadest institutional equity product categories, as defined by Mercer:
  - Global Equity
  - Emerging Markets Equity
  - U.S. Large Cap Value Equity
  - U.S. Large Cap Growth Equity
  - U.S. Large Cap Core Equity
  - U.S. Mid-Cap Value Equity
  - U.S. Mid-Cap Growth Equity
  - U.S. Mid-Cap Core Equity
  - U.S. Small Cap Value Equity
  - U.S. Small Cap Growth Equity
  - U.S. Small Cap Core Equity
- **Return-focused:** Returns were the primary measure of independent boutique manager value creation utilized in our analysis. Gross returns, a primary metric reported by investment managers within the MercerInsight® database, were utilized for comparing boutique returns relative to non-boutique returns, given the minimal disparity of fee rates between boutique and non-boutique strategies. Meanwhile, we estimated net excess returns versus indices, incorporating boutiques' available published or "rack" fee rates entered by investment managers in MercerInsight®, in order to approximate net value creation for investors.
- **Trailing 20-year time horizon:** Our analysis is based on rolling one-year returns over the trailing 20 years ending 12/31/19 (i.e., 20 individual measurement periods between 1999 and 2019). The rolling one-year focus ultimately yielded a larger sample size than rolling three- or five-year returns.
- **Equal-weighted basis:** Importantly, our analysis represents a measure of performance by strategy, instead of performance by manager. In order to avoid bias to any one investment strategy, each individual strategy was given an equal weighting when aggregating results for each product category. Duplicate strategies (typically sub-advisory) were excluded from our analysis in order to avoid excessive weighting to any single strategy by double counting, though this had a minimal impact on the results given the small number of duplicates broadly observed.
- **Comparison to product benchmarks**: Our analysis compared the performance of the 11 broadest institutional equity product categories to their respective benchmarks, as defined by Mercer: MSCI World, MSCI Emerging Markets, Russell 1000 Value, Russell 1000 Growth, Russell 1000, Russell Midcap Value, Russell Midcap Growth, Russell Midcap, Russell 2000 Value, Russell 2000 Growth, and Russell 2000.
- **Accounting for survivorship bias:** Our analysis captured each individual strategy reporting gross returns to MercerInsight® in all 11 product categories at any point during the trailing 20-year period, including deleted strategies (strategies and/or managers no longer in existence, or no longer providing data to Mercer). Thus, we minimized the impact of survivorship bias.

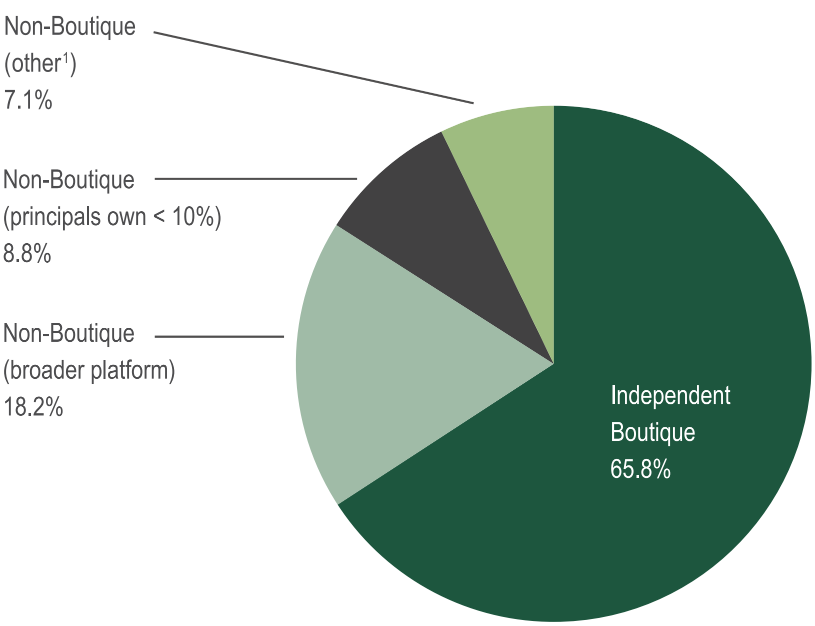
Classification of Independent Boutique and Non-Boutique investment managers

Our proprietary classification of over 1,300 individual investment managers and their corresponding investment strategies in the MercerInsight® database as either "boutiques" or "non-boutiques" (Figure 9) was an integral component of the analysis. Boutiques ultimately comprised 66% of the investment managers, but just 44% of the investment strategies captured in our data set.

Investment managers and their corresponding strategies were classified as boutiques in our analysis only if they fit each of the following four specific criteria:

1. **Significant principal ownership:** Determined by whether principals held a significant amount of equity in their own firm, defined as greater than 10%. The 10% threshold was set to (i) exclude firms whose principals have received small amounts of equity as part of their annual compensation and (ii) align with a significance threshold in the SEC database (individuals or entities with ownership below 10% appear as either "NA" or "A" in the SEC database). However, principals at the vast majority of boutique investment managers held a significant minority, majority, or 100% of their firms' equity.
2. **Investment management is sole business:** Investment managers exclusively focused on investing were the only firms eligible to be classified as boutiques in our analysis. This effectively excluded managers that were part of broader financial services platforms, including banks, life insurers, and wealth managers providing a broad suite of advice-based services.
3. **Manage less than $100 billion in AUM:** Investment managers with over $100 billion in AUM were excluded from the classification of boutiques. While some investment managers with over $100 billion in AUM could certainly be considered boutiques, the purpose of this criterion was to increase the objectivity of the analysis while simultaneously eliminating certain firms that have accumulated large levels of AUM by offering a wide variety of products across various asset classes, styles, and geographic regions.
4. **Not exclusively smart beta or fund-of-funds:** Managers exclusively offering smart beta or fund-of-funds platforms were removed from consideration as boutiques. Instead, the firms classified as boutiques in our analysis included active managers with teams focused on adding value through distinct investment philosophies and highly focused investment processes.

FIGURE 9: CLASSIFICATION OF INVESTMENT MANAGERS: 66% Boutiques, 34% Non-Boutiques



Source: AMG proprietary classification of investment managers in the MercerInsight® database.

[1] Non-boutiques due to classification as fund-of-funds or smart beta, AUM in excess of $100 billion, or combinations of multiple criteria.

Appendix

FIGURE 10: BOUTIQUE, NON-BOUTIQUE, AND BENCHMARK AVERAGE ROLLING ONE-YEAR PERFORMANCE

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	AVG.
Average Excess vs. Non-Boutique (bps)	202	251	129	160	39	(18)	13	(14)	37	29	57	61	(50)	44	(46)	(51)	74	(4)	(20)	(69)	**41**
Average Excess vs. Indices net of fees (bps)	879	549	261	31	(8)	111	(188)	307	(9)	245	(5)	(19)	(122)	142	(218)	3	(177)	57	(60)	(134)	**82**
Average VIX	23	26	27	22	15	13	13	17	33	32	23	24	18	14	14	17	16	11	17	15	**20**
Global Equity																					
Average Boutique Returns	(5%)	(11%)	(13%)	39%	18%	14%	23%	14%	(39%)	36%	15%	(6%)	16%	27%	4%	0%	7%	26%	(9%)	26%	**9%**
Excess return vs. Non-Boutiques (bps)	178	218	388	314	161	11	16	72	156	(31)	107	105	(132)	(31)	(56)	(54)	111	42	(3)	(87)	**74**
Excess return vs. Index net of fees (bps)	727	482	607	481	246	293	166	339	48	439	200	(128)	(100)	(79)	(212)	(31)	(153)	186	(144)	(290)	**154**
Emerging Markets Equity																					
Average Boutique Returns	(25%)	2%	(2%)	69%	27%	37%	34%	42%	(50%)	82%	23%	(18%)	21%	3%	(1%)	(13%)	12%	38%	(15%)	21%	**14%**
Excess return vs. Non-Boutiques (bps)	360	299	178	834	(15)	(12)	(117)	165	265	39	172	104	27	254	11	(52)	76	(113)	11	(101)	**119**
Excess return vs. Index net of fees (bps)	422	268	267	1,085	(68)	49	(57)	89	147	155	206	(110)	24	359	(51)	(18)	(150)	(205)	(264)	18	**108**
U.S. Large Cap Value Equity																					
Average Boutique Returns	12%	1%	(17%)	32%	16%	9%	19%	4%	(36%)	28%	15%	1%	15%	35%	12%	(3%)	15%	18%	(9%)	27%	**10%**
Excess return vs. Non-Boutiques (bps)	122	168	37	204	78	61	(31)	80	(9)	366	19	(16)	(106)	127	(43)	(47)	43	36	(102)	59	**52**
Excess return vs. Index net of fees (bps)	435	584	(155)	185	(112)	95	(360)	393	75	814	(108)	(39)	(274)	195	(233)	5	(254)	374	(150)	39	**76**
U.S. Large Cap Growth Equity																					
Average Boutique Returns	(7%)	(16%)	(24%)	31%	11%	8%	9%	15%	(38%)	33%	17%	(0%)	15%	34%	12%	4%	5%	28%	(2%)	33%	**8%**
Excess return vs. Non-Boutiques (bps)	258	131	196	172	161	(3)	68	39	58	(393)	30	(1)	(134)	(102)	(44)	(169)	135	(232)	(171)	(114)	**(6)**
Excess return vs. Index net of fees (bps)	1,438	352	333	106	378	204	(33)	256	(7)	(478)	(37)	(332)	(64)	16	(164)	(228)	(241)	(277)	(70)	(402)	**38**
U.S. Large Cap Core Equity																					
Average Boutique Returns	1%	(7%)	(18%)	29%	13%	8%	16%	8%	(35%)	28%	15%	3%	15%	34%	13%	1%	11%	22%	(5%)	30%	**9%**
Excess return vs. Non-Boutiques (bps)	350	268	235	(95)	75	(32)	21	42	69	(110)	(1)	100	(82)	28	(52)	(27)	43	(14)	(12)	68	**44**
Excess return vs. Index net of fees (bps)	798	450	271	(205)	86	57	(42)	155	179	(96)	(171)	43	(178)	(22)	(96)	(65)	(177)	(34)	(126)	(168)	**33**
U.S. Mid-Cap Value Equity																					
Average Boutique Returns	22%	13%	(10%)	38%	22%	11%	18%	2%	(36%)	39%	23%	(1%)	18%	37%	11%	(3%)	19%	15%	(12%)	26%	**13%**
Excess return vs. Non-Boutiques (bps)	20	406	91	(78)	52	(96)	12	(185)	(76)	167	47	20	71	92	(95)	129	106	116	81	(200)	**34**
Excess return vs. Index net of fees (bps)	177	972	(84)	(49)	(241)	(253)	(326)	242	192	413	(224)	(34)	(131)	305	(432)	145	(142)	140	(64)	(163)	**22**
U.S. Mid-Cap Growth Equity																					
Average Boutique Returns	3%	(12%)	(22%)	36%	15%	12%	11%	17%	(41%)	39%	26%	(2%)	14%	37%	9%	0%	6%	25%	(4%)	35%	**10%**
Excess return vs. Non-Boutiques (bps)	(204)	157	57	(202)	(118)	(32)	183	(390)	118	(357)	(50)	68	(146)	(68)	54	(129)	75	(243)	(13)	(18)	**(63)**
Excess return vs. Index net of fees (bps)	1,413	712	442	(755)	(140)	(64)	5	468	237	(810)	(69)	(93)	(281)	10	(321)	(40)	(193)	(133)	12	(138)	**13**
U.S. Mid-Cap Core Equity																					
Average Boutique Returns	17%	2%	(14%)	37%	19%	12%	13%	9%	(39%)	39%	26%	(0%)	16%	37%	10%	(0%)	14%	21%	(10%)	29%	**12%**
Excess return vs. Non-Boutiques (bps)	271	242	(1)	57	33	(136)	2	(15)	(24)	34	196	265	4	95	(41)	20	(81)	141	27	(114)	**49**
Excess return vs. Index net of fees (bps)	783	725	142	(338)	(164)	(92)	(310)	276	197	(255)	(12)	53	(157)	131	(368)	137	(24)	142	(112)	(246)	**25**
U.S. Small Cap Value Equity																					
Average Boutique Returns	23%	20%	(9%)	48%	23%	9%	19%	(2%)	(34%)	40%	28%	(3%)	20%	40%	4%	(5%)	27%	12%	(14%)	25%	**14%**
Excess return vs. Non-Boutiques (bps)	137	(1)	(35)	333	45	76	57	47	(235)	845	97	5	208	192	(110)	(140)	(64)	55	(40)	(17)	**73**
Excess return vs. Index net of fees (bps)	(44)	472	137	111	32	350	(511)	683	(554)	1,888	230	200	61	478	(69)	139	(569)	312	(213)	125	**163**
U.S. Small Cap Growth Equity																					
Average Boutique Returns	(2%)	(5%)	(26%)	50%	13%	8%	12%	11%	(41%)	36%	29%	(1%)	14%	46%	3%	(0%)	12%	24%	(3%)	29%	**11%**
Excess return vs. Non-Boutiques (bps)	440	448	68	252	(105)	(21)	(93)	(80)	(0)	(414)	(66)	31	(135)	72	(15)	57	269	(68)	95	(249)	**24**
Excess return vs. Index net of fees (bps)	2,000	352	338	26	(182)	313	(227)	359	(341)	49	(93)	136	(125)	225	(297)	25	22	105	593	(33)	**162**
U.S. Small Cap Core Equity																					
Average Boutique Returns	14%	11%	(13%)	46%	21%	9%	16%	1%	(35%)	35%	29%	(2%)	17%	40%	5%	(3%)	22%	17%	(10%)	25%	**12%**
Excess return vs. Non-Boutiques (bps)	297	424	211	(27)	63	(11)	25	74	86	168	74	(15)	(122)	(178)	(114)	(153)	97	236	(92)	18	**53**
Excess return vs. Index net of fees (bps)	1,516	672	568	(307)	81	264	(377)	119	(276)	573	22	93	(121)	(59)	(161)	(40)	(64)	16	(121)	(212)	**109**

Source: AMG proprietary analysis. Firms represented include AMG Affiliates. MercerInsight® database utilized for return and fee data. MercerInsight® database utilized for return data. Net returns estimated by taking one-year rolling gross returns for institutional strategies during trailing 20-year period ending 12/31/19 less estimated average boutique fee rates based on available data for each product category. Primary indices include MSCI World, MSCI Emerging Markets, Russell 1000 Value, Russell 1000 Growth, Russell 1000, Russell Midcap Value, Russell Midcap Growth, Russell Midcap, Russell 2000 Value, Russell 2000 Growth, and Russell 2000. Average VIX values calculated by AMG utilizing CBOE historical data.

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